

**REMARKS**

Claims 1-11, 13-24 and 26-31 are pending in this application. Claims 24, 26 and 28-31 are currently withdrawn. By this Amendment, claim 1 is amended to include the subject matter of original claim 12. Claims 1 and 24 are further amended to define the presently claimed subject matter (i.e., the polyurethane polymer) and are supported at least by paragraphs [0037]-[0038], [0061]-[0065], [0075]-[0076], [0118]-[0120] and Table 2 of the specification. Claims 25 and 32 are canceled. No new matter is added by this Amendment.

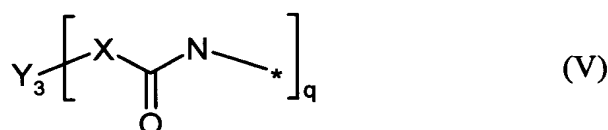
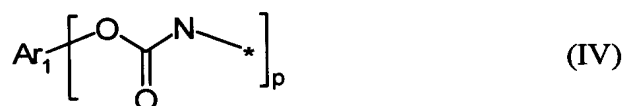
**I. Interview**

The courtesies extended to Applicants' representative by Examiner Baumstein at the interview held May 14, 2009, are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below, which constitute Applicants' record of the interview.

The arguments presented during the interview corresponded to the arguments presented in the May 4, 2009 Amendment.

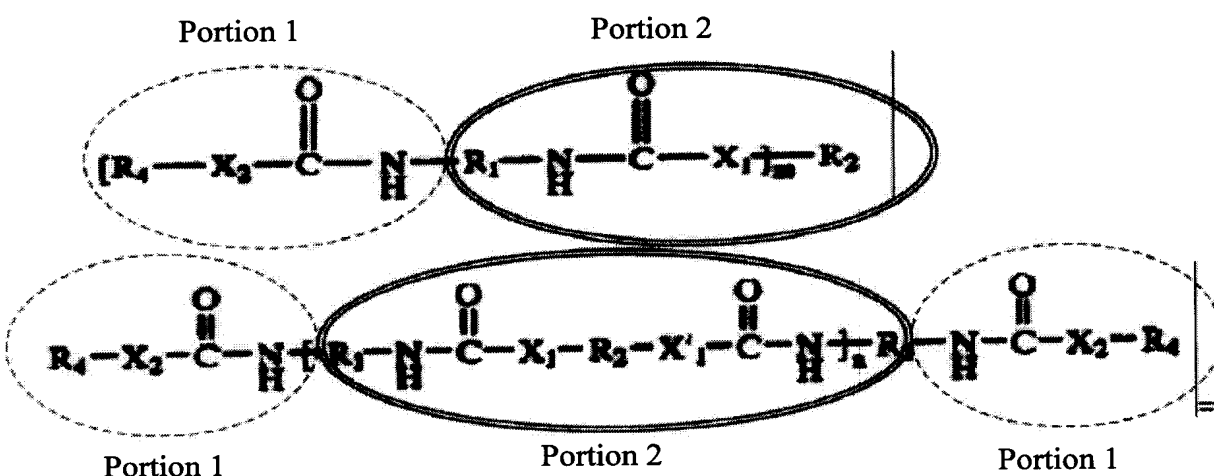
During the interview, Examiner Baumstein alleged that the chemical formulas of the epoxide-modified polyurethane resins described at col. 2, lines 42-48 of Lu read on formula (I) of polymer B recited in claim 1. Specifically, Examiner Baumstein alleged that because Lu describes that (1)  $R_1$  or  $R_2$  in Formulas 1 and 2 of Lu can be an aromatic radical (similar to  $Y_1$  of Formula I), and (2)  $X_1$ ,  $X_2$ , or  $X_1'$  of the above formulas can be an -O-, the composition described in Lu could be defined as an aromatic structural unit bound in the polymer chain via urethane groups. Applicants respectfully disagree and provide the below explanation to address the Patent Office's allegation.

Lu does not describe that the polyurethane prepolymer of the polymer B simultaneously has the structural elements of the formulae (IV) and (V)



in which  $p$  is 2, 3 or 4;  $q$  is 2, 3 or 4;  $X$  is S, O or NH;  $\text{Ar}_1$  is a  $p$ -valent, optionally substituted, aryl radical;  $\text{Y}_3$  is a  $q$ -valent radical of an isocyanate-reactive polymer after removal of the terminal amino, thiol or hydroxyl groups; and  $*$  is the linkage point to the remainder of the polyurethane prepolymer as recited in claim 1.

In other words, claim 1 recites that the  $\text{Y}_1$  portion of the polyurethane prepolymer has a structural unit defined as a " $p$ -valent aryl radical" ( $\text{Ar}_1$  of Formula (IV)) bound via urethane groups. However, the chemical formulas described in Lu do not describe a polyurethane prepolymer having this feature. These chemical formulas and Formula (I) of claim 1 are reproduced below for the convenience of the Patent Office.



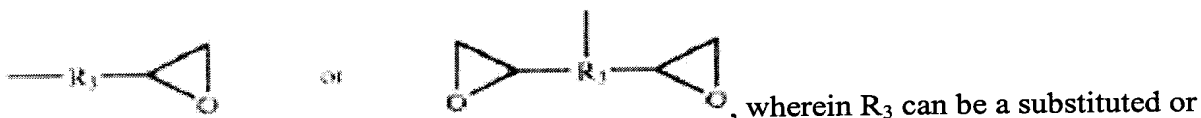
**Formulas 1 and 2 of Lu**



**Formula (I) of Polymer B in Claim 1 of Present Application**

As shown above, under the Patent Office's reasoning, the dashed line portions on Formulas 1 and 2 (Portion 1) of Lu allegedly correspond to the dashed line portion in Formula (I) of Polymer B and the thick, double lines on Formulas 1 and 2 (Portion 2) of Lu allegedly correspond to the polyurethane prepolymer of Formula I (i.e., Y<sub>1</sub>) of Polymer B.

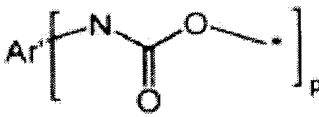
However, Portion 1 of Formulas 1 and 2 of Lu does not possess a structural element that corresponds to polyurethane prepolymer of claim 1, wherein the polyurethane prepolymer simultaneously has the structural elements of the formulae (IV) and (V). As shown above, Portion 1 only has one location, R<sub>4</sub>, which does not embody the aromatic structural unit of claim 1. Lu defines that the R<sub>4</sub> moiety of the above formulae can be

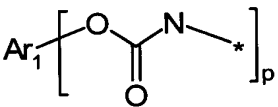


unsubstituted aliphatic hydrocarbon radical, cycloaliphatic hydrocarbon radical, an alkoxy radical, a polyester or a polyether. See Lu, col. 6, lines 46-59. None of these are aromatic radicals, and thus R<sub>4</sub> of Formulas 1 and 2 of Lu does not describe a polyurethane prepolymer with a structural element that corresponds to Formula (IV) of claim 1.

However, Portion 2 of Formulas 1 and 2 of Lu also does not possess a structural element that corresponds to polyurethane prepolymer of claim 1. As shown above, Portion 2 only has two locations, R<sub>1</sub> and R<sub>2</sub>, neither of which represents the aromatic structural unit of claim 1.

Regarding the R<sub>1</sub> location, although Lu describes that R<sub>1</sub> in both Formulas 1 and 2 of Lu can be an aromatic radical, the R<sub>1</sub> moiety is always bound directly to an NH group. Such

a structural element would be characterized as . However, in

Formula (IV) of claim 1 , the aromatic radical (Ar<sub>1</sub>) is not bound to an NH group, but an oxygen atom. Because the R<sub>1</sub> location in Formulas 1 and 2 of Lu has an orientation that is entirely opposite from that of Formula (IV) of claim 1, the R<sub>1</sub> location does not represent the aromatic structural element recited claim 1.

Regarding the R<sub>2</sub> location, although Lu describes that X<sub>1</sub> and X'<sub>1</sub> can be an oxygen atom, Lu does not describe that R<sub>2</sub> can be an aromatic radical. Lu merely describes that R<sub>2</sub> may be a substituted or unsubstituted aliphatic hydrocarbon radical, cycloaliphatic hydrocarbon radical, an alkoxy radical, a polyester or a polyether. None of these are aromatic radicals, and thus R<sub>2</sub> (like R<sub>1</sub> and R<sub>4</sub>) of Formulas 1 and 2 of Lu also does not describe a structural element of a polyurethane prepolymer that corresponds to Formula (IV) of claim 1.

For the reasons described above, Portion 1 and Portion 2 of Formulas 1 and 2 of Lu do not have a structural element that corresponds to Formula (IV) of claim 1.

In view of the foregoing amendments and arguments, as well as the amendments and arguments set forth in the May 4, 2009 Amendment, Applicants respectfully request withdrawal of the rejection. Applicants further request that upon allowance of claims 1-11, 13-23 and 27, claims 24, 26 and 28-31 be rejoined with the present application and similarly allowed.

## II. Conclusion

In view of the foregoing, as well as the amendments and arguments set forth in the May 4, 2009 Amendment, it is respectfully submitted that this application is in condition for

allowance. Favorable reconsideration and prompt allowance of claims 1-11, 13-24 and 26-31 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Date: May 29, 2009

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